

U.S. APPLICATION NO. 09/448,606
RESPONSE UNDER 37 C.F.R. § 1.116

2. Claims 13 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okazato et al. (USP 4,723,832) in view of Leger et al.

Claims 3-5, 7-9, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form, including all the limitations of the base and any intervening claims.

Applicant respectfully traverses the prior art rejections.

Claim Rejections - 35 U.S.C. § 103

1. *Claims 1, 2, 6 and 10-12 In View Of Roe et al. And Leger et al. (USP 5,213,905).*

In rejecting claims 1, 2, 6 and 10-12, the Examiner reiterates verbatim the grounds of rejection set forth in the previous Office Action of July 12, 2002. In response to Applicant's traversal arguments in the Amendment of October 9, 2002, the Examiner further states:

In response to applicant's argument that the examiner's conclusion of obviousness is based upon hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such reconstruction is proper. See *In re McLaughlin*, 443, F.2d 1392, 170 USPQ 209 (CCPA 1971).

Office Action at page 5.

Applicant does not dispute the legal principle rule of *In re McLaughlin* summarized above. However, Applicant submits that the Examiner's rejection is based on improper hindsight reasoning, not merely hindsight reasoning. In particular, the grounds of rejection

contravene the legal principle set forth by the CCPA in *In re McLaughlin* that the hindsight reasoning cannot include knowledge gleaned only from the applicant's disclosure. In fact, the grounds of rejection do just that, as evident by the following quotation:

Applicant further argues that the present invention is in the field of mechanical reinforcement for cabling, and not in the field of armored flat sheet as disclosed by Leger et al. As recited in the claimed invention that the cable is structurally reinforced with **armoring**, and Leger et al. is directed to an **armored** sheet. Accordingly, Leger et al. is not a non-analogous art. In addition, it is the fact that covering a steel core with a layer of stainless steel would provide the composite product with a good corrosion resistance as taught by Leger et al., therefore, one skilled in the art would at the time the invention was made [] apply the teaching of Leger et al. into the cables of Roe et al. and Okazato et al.

Office Action at page 5 (emphasis in original). Applicant disagrees.

Again, the present invention is in the field of mechanical reinforcement for cabling, and not in the field of armored flat sheets. The Examiner's characterization of the field of endeavor as simply "armoring" is far too generic (i.e., too broad) to be meaningful to one skilled in the art of cable reinforcement. Stated otherwise, Leger et al. would not have commended itself to one skilled in the art of cable reinforcement. Indeed, as Applicant noted in the last Amendment, mechanical reinforcement or armoring of cabling is in the form of strands of wires that provide tensile support for the cabling. The manufacture, composition and assembly of this reinforcement, as well as its performance, are unique to cabling, and entirely different from that for armored flat sheets. The Examiner's response to Applicant's arguments does not even address this important distinction. Applicant notes that the Manual of Patent Examining Procedure ("MPEP") § 707.07(f) requires Examiners to respond specifically to traversals

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(“Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it.”).

To underscore, “[t]he scope of the prior art includes art that is ‘reasonably pertinent to the particular problem with which the invention was involved.’” Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535, 218 USPQ 871, 876 (Fed. Cir. 1983). Ruiz v. A.B. Chance Co., 234 F.3d 654, 57 USPQ2d 1161 (Fed. Cir. 2000). The armoring of plates to withstand the impact of a projectile is not reasonably pertinent to the problem addressed by the present invention. Clearly, therefore, the claimed invention and Leger et al. are not within the same field of endeavor, since they do not have essentially the same function and structure.

The Examiner argues: “the fact that covering a steel core with a layer of stainless steel would provide the composite product with a good corrosion resistance as taught by Leger et al., therefore, one skilled in the art would at the time the invention was made [] apply the teaching of Leger et al. into the cables of Roe et al. and Okazato et al.” Office Action at page 5.

Again, however, the Examiner’s motivation to modify the cable of Roe et al. in view of the disclosure of Leger et al. is based on the very generalized objective of providing good “corrosion resistance.” However, this motivation to modify ignores the very specific context of the composite product disclosed in Leger et al. Accordingly, even assuming that Leger et al. is analogous art (and Applicant maintains that it is not), the reference, whether considered alone or in combination with Roe et al., does not provide the requisite motivation to modify the cable of Roe et al.

Again, Leger et al. is directed to a storage tank that uses armored flat sheets of material composed of flat sheets of armored steel that can resist penetration by a projectile, and stainless steel plating for protection against corrosive fluid stored within the tank. The reference notes significant problems in forming the composite flat plated sheet:

When a composite material such as that just described is quenched, the expansions or contractions of the two materials are not the same and the assembly behaves like a bimetallic strip.

To obtain good flatness of the plated sheet after quenching, this operation is preferably carried out in a quenching machine under a press which keeps the sheet quite flat during the quenching, and this limits the residual deformation to a camber of less than 6 mm/meter, whereas, using conventional quenching, the deformation corresponds to cambers greater than 10 mm/meter. Now, since the armor steel is very hard, it is very difficult to flatten a sheet which is thus deformed.

Leger et al. at column 3, lines 46-59. As Applicant noted in the last response, these problems and their solutions are unique to flat metal plates and are not reasonably pertinent to the particular problem with which the inventor was involved, that of providing improved mechanical reinforcement for cabling. The Examiner's response to Applicant's arguments does not address this critical difference as well.

Moreover, neither applied reference discloses strands of non-flat composite material for cable reinforcement. That is, aside from the lack of motivation to modify, the references do not even teach or suggest a critical element of the rejected claims - a composite steel wire having a core of steel covered in a layer of stainless steel.

To further point out the stark and fundamental differences between the present invention and Leger et al., making the latter non-analogous art, Applicants respectfully submit the following:

- 1) *In Leger et al., the stainless steel protects the steel from the content. In the present invention, the stainless steel protects the content from the steel.*

a) Leger et al. discloses:

- A tank containing corrosive fluids.
- The inner wall of the tank (stainless steel) protects the outer wall of the tank (steel) from the content of the tank (corrosive fluids). *See Leger et al. at column 1, lines 12-20; column 4, lines 34-37; and claim 9.*
- In summary, the stainless steel protects STEEL FROM CONTENT.

b) The present invention claims:

- A cable containing conductors (optical fibers or power conductors).
- The covering of wire (stainless steel) protects the content of the cable (conductor) from the core of wire (stainless), because effect of corrosion on wire steel core is hydrogen generation harmful for conductors (optical fibers). *See paragraph 5 of our published specification.*
- In summary, the stainless steel protects CONTENT FROM STEEL.

- 2) *Possible courses of action to be taken by person skilled in the art - considered arts in Leger et al. and in the present invention are at odd; moreover, because a hybrid solution is needed in one and at first sight not needed in the other.*

a) Leger et al. teaches:

- A skilled artisan desires a tank wall that addresses two problems simultaneously: a mechanical one (resistance to penetration of projectile), and a chemical one (good corrosion resistance).
- For such a tank wall made from steel, the skilled artisan may consider two possibilities: using steel only, which would lead to solving the mechanical problem, but not the chemical problem (*see Leger et al. at column 1, lines 12-14*); or using stainless steel only, which would lead to solving the chemical problem (*see Leger et al. at column 4, line 34-35*), but not the mechanical problem because no single material in this field can solve both (*see Leger et al. at column 2, lines 33-36*).

Accordingly, the skilled artisan is condemned to search for another solution to solve both his problems, mechanical and chemical, and, thus, arrives at the hybrid solution.

- In summary, in the technical field of Leger et al., steel alone cannot solve the chemical problem and stainless steel alone cannot solve the mechanical problem, so the skilled artisan NEEDS and searches for

something else to solve both mechanical and chemical problems, for example a hybrid solution.

b) In present invention, on the other hand:

- The skilled artisan wants cable armouring *wire* to address simultaneously two problems: a mechanical one (tensile resistance), and a chemical one (good corrosion resistance).
- For such a wire, when using steel, the skilled artisan considers of two possibilities: using steel alone, which would lead to solving the mechanical problem, but not the chemical problem (*see* paragraph 5 of the published specification); or using stainless steel alone, which would lead to solving the chemical problem as well as the mechanical problem (*see* paragraph 3 of the published specification and especially end of said paragraph 3). Accordingly, the skilled artisan is not condemned to search for another solution to solve both his problems, mechanical and chemical; because use of stainless steel only can solve both his mechanical and chemical problems, there is no need for another solution unless you want to address at the same time a third problem, an economical one (i.e. to get a low cost armouring wire).
- In summary, in the present invention's field, stainless steel *alone* can solve *both* mechanical and chemical problems, so there is NO NEED for something else to solve both mechanical and chemical problems,

unless one want to further address at the same time an additional economical problem.

3) *How to explain the different structures if not by different domains*

a) In Leger et al.:

- The armouring member is the wall of the tank.
- In the tank wall, the inner face of the wall (inner part of armouring member) is stainless steel and the outer face of the wall (outer part of armouring member) is steel (*see* Leger et al. at column 4, lines 34-37; and claim 9).
- In summary, in the Leger et al. armouring member, the INNER part is stainless steel and the OUTER part is steel.

b) In the present invention:

- The armouring member is, for example, a wire in the cable.
- In the cable wire, the inner part of wire is steel (core) and the outer part is stainless steel (covering) (*see* claim 1).
- In summary, in the present invention's armouring member, the OUTER part is stainless steel and the INNER part is steel.

It is clear, therefore, that the teaching in Leger et al. is for a structure so different from that of the present invention, that it is not within the field of the present invention's endeavor and not reasonably pertinent to the particular problem with which the present invention solves .

Applicant kindly requests the Examiner to carefully reconsider the foregoing specific points of distinction between the claimed invention in the rejected claims and the applied art, and either specifically address each point, or withdraw the prior art rejection.

2. Claims 13 And 15 In View Of Okazato et al. And Leger et al.

In rejecting claims 13 and 15, the Examiner acknowledges that "Okazato et al. does not disclose the tube having a layer of stainless steel covering the steel core." Office Action at page 3. However, the Examiner relies on Leger et al. for essentially the same reasons as set forth with respect to the rejection of claims 1, 2, 6 and 10-12.

In response, Applicant submits that Okazato et al. relates to composite cables, and the alleged modification of Okazato et al. in view of Leger et al. to modify the cable pipe 1 to have the claimed composite structure would not have been obvious for reasons similar to those set forth above with respect to claims 1, 2, 6 and 10-12. In particular, Leger et al. discloses a composite flat product that is armored to resist projectile penetration and corrosion from contained fluids.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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